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EXAMINER
PADMANABHAN, KAVITA

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2008*.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-12,15-24 and 26-31* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-12,15-24 and 26-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Status of Claims

1.   Claims 3-12, 15-24, and 26-31 are pending.

2.   Claims 26-31 have been amended.

3.   Claims 3-12, 15-24, and 26-31 are rejected.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6.   **Claims 3-12, 15-24, and 26-31** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Goldring** (US 5,613,113), cited by applicant.

In regards to **claim 26**, **Goldring** teaches a method for using a computer to define, store and retrieve data of an industrial process, said method comprising:

collecting with a monitor said output data of said industrial process and providing said data of said industrial process to said computer **(Goldring; col. 1, lines 38-41; col. 3, lines 27-31** – *"computer process that involves a sequence of events would be a commercial order filling or banking system"* **and** *"correlate events in an activity log with time series data of interest"* – **constitutes collecting and operating on data of an industrial process in that the data pertains to the "commercial industry" or the "banking industry.");**

operating said computer with a program to define said industrial process by

(a) identifying, in response to input data entered by a user, one or more events and/or activities of said industrial process and one or more attributes of said events and/or activities **(Goldring; col. 3, lines 36-58; col. 5, lines 53-56** – *"identifying the recorded events having the characteristic of interest"* **and** *"user can interactively communicate with the data base manager")*;

(b) classifying said identified events, activities and attributes according to a data structure that comprises at least a first event type or at least a first activity type and a plurality of attribute types therefore **(Goldring; col. 8, line 60 – col. 9, line 14; Fig. 3 – figure 3 shows a data structure having event types, such as update events, and a plurality of attribute types, such as event name and RBA);** and

(c) organizing a plurality of storage volumes of said database for said classified attribute types, wherein said plurality of storage volumes comprises first and

second storage volumes that are organized for said first activity or for said first

event type and for storage of values of first and second ones of said attributes,

respectively, of said first activity or of said first event type **(Goldring; col. 5,**

lines 2-23; Fig. 3 – activity log, represented by Fig. 2, reference character 32,

is a first storage volume that is organized according to RBA attribute; Fig. 4

and col. 7, lines 28-32, col. 9, lines 15-19 – Change_Data table, represented by

Fig. 2, reference character 42, is a second storage volume that is organized

according to the event name attribute); and

to store and retrieve said collected data of said industrial process when running by

(d) using said data structure in a manner that permits access to said organized

storage volumes of said database by said activities, events and attributes that are

identified by step (a) to store said data of said industrial process in said storage

volumes according to said data structure and, in response to a request, which

identifies said first activity type or said first event type and said first attribute, to

retrieve from said first storage volume one or more values of said first attribute

(Goldring; col. 5, lines 2-23, 48-59; col. 6, lines 18-20; col. 9, lines 52-60 – "If

the activity log is later consulted, the time stamp values can be located with their

corresponding transaction sequence numbers and accessed by users." **- events**

and attributes are stored in the database tables and are retrieved based on

user requests); and

(e) providing said retrieved output data to a client device **(Goldring; col. 5, lines**

48-59; col. 9, lines 52-60; Fig. 3 – *"The data base manager 30, for example, can*

comprise a software process that operates in accordance with Structures Query

Language (SQL) requests", *"provides an interface for the users. A user can*

interactively communicate with the data base manager", and *"when a user*

requests a snapshot copy" – **data is retrieved from database and provided to**

user).

Goldring does not expressly teach *in response to a request, which identifies said first*

activity type or said first event type *and said second attribute* to retrieve *from said second*

storage volume one or more values of said second attribute.

However, since Goldring teaches the database being implemented as a plurality of tables,

which constitute storage volumes, and teaches requesting specific data from the plurality of

tables **(Goldring; col. 5, lines 48-59; col. 6, lines 18-20; col. 7, lines 28-32)**, it would have been

obvious to one of ordinary skill in the art at the time of the applicant's invention to retrieve data

from the table from which it is most efficiently accessed, whereby a request specifying an

attribute whose data is stored in the second storage volume of the database could obviously result

in the corresponding data being retrieved from the second storage volume.

In regards to **claim 3**, **Goldring** teaches the method of claim 26, wherein at least one of

said classified attribute types is a start time **(Goldring; Fig. 3)**, and wherein at least one of said

storage volumes is accessed according to said start time type for storage and retrieval of values

of said attributes corresponding to at least one of said events and/or activities **(Goldring; col. 5,**

lines 40-44; col. 6, lines 18-20; Fig. 3).

In regards to **claim 4**, **Goldring** teaches the method of claim 26, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein said at least one storage volume of said database is allocated to all of said common attributes **(Goldring; col. 8, line 60 – col. 9, line 14; Fig. 3; Fig. 2, reference characters 25, 32)**.

In regards to **claim 5**, **Goldring** teaches the method of claim 26, further comprising compressing said data of said industrial process which is stored in a first one of said storage volumes according to identity of values of said data of said industrial process of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes **(Goldring; col. 7, lines 20-61 – data of activity log is compressed and placed in the system tables based on the values of the event attributes)**.

In regards to **claim 6**, **Goldring** teaches the method of claim 5, wherein said data structure further comprises a time stamp **(Goldring; Fig. 3)**, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values of said data of said industrial process, and wherein said values of said data of said industrial process of a first event are retrieved from said first storage volume by using a value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value **(Goldring; col. 5, lines 40-44; col. 6, lines 18-20; Fig. 3)**.

In regards to **claim 7**, **Goldring** teaches the method of claim 26, wherein a value of an attribute that is always the same for a specific one of said event or activity types is classified as static, and further comprising optimizing data storage in said first one of said storage volumes by omitting storage of a static value **(Goldring; col. 5, lines 7-16; col. 5, line 67 – col. 6, line 6 – doesn't store the other attributes related to the user table that changed – only the update and the sequence number, because the others didn't change, and are therefore static)**.

In regards to **claim 8**, **Goldring** teaches the method of claim 26, wherein said industrial process is one of a plurality of industrial processes, and wherein said program operates said computer each of said plurality of processes using said data structure **(Goldring; col. 1, lines 25-52; col. 6, lines 26-29)**.

In regards to **claim 9**, **Goldring** teaches the method of claim 8, wherein at least two of said plurality of industrial processes are different from one another **(Goldring; col. 1, lines 25-52; col. 6, lines 26-29)**.

In regards to **claim 10**, **Goldring** teaches the method of claim 26, further comprising presenting data values of different ones of said events and/or activities that are defined as different event and/or activity types in any one of a plurality of formats to said client device **(Goldring; col. 6, lines 18-20; col. 5, lines 48-59; col. 9, lines 52-60; Fig. 3)**.

In regards to **claim 11**, **Goldring** teaches the method of claim 10, wherein said plurality

of formats are selected from the group consisting of: row format, column format and chart format

(Goldring; Fig. 3).

In regards to **claim 12**, **Goldring** teaches the method of claim 26, further comprising

developing a map structure for mapping diverse external names of said attributes and/or field

contents thereof to a common internal attribute name and/or field content **(Goldring; col. 5, lines**

30-31; col. 5, line 59 – col. 6, line 6; col. 6, lines 54-65; Fig. 3; Fig. 4; – updates, regardless of

what type or how they are referred to externally, by a user for example, are internally

stored as update operations; also, a table constitutes a map structure).

In regards to **claim 30**, **Goldring** teaches the method of claim 26, wherein a portion of

said data of said industrial process is continuous data of a time variable parameter, and wherein

said monitor comprises at least one sensor that receives said continuous data and provides it to

said computer **(Goldring; col. 3, lines 36-58)**.

Claims 27, 15-24, and 31 are rejected with the same citations given for claims 26, 3-12,

and 30, respectively.

Claims 28 and 29 are rejected with the same citations given for claim 26 and 30,

respectively.

Response to Amendment

7.   Applicant's amendments filed 2/11/08 with respect to objection to claim 27 have been

fully considered. The objection has been withdrawn accordingly.

8.   Applicant's amendments filed 2/11/08 with respect to the 35 USC 112, 1st paragraph

rejections have been fully considered. The rejections have been withdrawn accordingly.

9.   Applicant's arguments filed 2/11/08 with respect to the 35 USC 112, 2nd paragraph

rejections prior art rejections have been fully considered. The rejections have been withdrawn

accordingly.

Response to Arguments

10.   Applicant's arguments filed 2/11/08 with respect to the prior art rejections have been fully

considered but they are not persuasive.

         Applicant argues at page 13 of applicant's remarks that independent claims 26-28 have

been amended to clarify that the program has two functions, and that Goldring completely lacks

the first function. The applicant argues that Goldring merely acts upon the data as entered by a

user and not on definitional data of a process.

         The examiner respectfully disagrees. The examiner first asserts that claim 26, for

example, recites "operating said computer with a program to define said industrial process by

identifying, in response to input data entered by a user, one or more events and/or activities of

said industrial process and one or more attributes of said events and/or activities". The examiner

asserts that Goldring's teaching of a user interacting with a database to create tables and to

identify events of interest meet the claimed limitation of identifying events in response to data

entered by a user. Claim 26 goes on to recite defining said industrial process by "classifying said

identified events, activities and attributes according to a data structure that comprises at least a

first event type or at least a first activity type and a plurality of attribute types therefore". The

examiner asserts that Goldring's teaching of a data structure with event and attribute types that

has data stored therein constitutes classifying the identified events according to a data structure

with event and attribute types.

Applicant also argues at page 13 of applicant's remarks that Goldring has a fixed storage

format for the activity log and does not access the activity log in a way that stores the attributes

in different storage volumes according to attribute type.

The examiner respectfully disagrees with this argument. The examiner asserts that

Goldring's teaching of organizing data in one storage volume according to one attribute type and

organizing data in a second storage volume according to a attribute type *(Goldring; Fig. 3 –*

activity log, represented by Fig. 2, reference character 32, is a first storage volume that is

organized according to RBA attribute; Fig. 4 – Change_Data table, represented by Fig. 2,

reference character 42, is a second storage volume that is organized according to the event

name attribute) meets the claimed limitation. The examiner also notes that the claim does not

require that only values for the attribute type according to which a particular storage volume is

organized may be stored in that particular storage volume.

In response to applicant's argument that the examiner's conclusion of obviousness is

based upon improper hindsight reasoning, it must be recognized that any judgment on

obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so

long as it takes into account only knowledge which was within the level of ordinary skill at the

time the claimed invention was made, and does not include knowledge gleaned only from the

applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392,

170 USPQ 209 (CCPA 1971). In the present case, Goldring teaches organizing data into

multiple storage volumes, i.e. tables. Therefore, it would have been obvious to retrieve data

from the table from which it is most efficiently accessed, whereby a request specifying an

attribute whose data is stored in the second storage volume of the database could obviously result

in the corresponding data being retrieved from the second storage volume.

Conclusion

11.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Kavita Padmanabhan** whose telephone number is **(571)272-

8352**. The examiner can normally be reached on Monday-Friday, 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kavita Padmanabhan   May 3, 2008
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